UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
10/676,941</td><td>Applicant(s)
VAN BEEK, PETRUS J. L.</td></tr>
<tr><td>Examiner
KENAN CEHIC</td><td>Art Unit
2416</td></tr>
</table>

<p align="center">-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</p>

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>06 April 2009</u>.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>23-45</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>23-45</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1.   Claim 26, 35-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

For claim 26 and 38, the limitation "IEEE 802.11 compliant" is indefinite. The IEEE

802.11 standards collection comprises a multitude of protocols and different versions,

including ones that postdate the specification.

For claim 36 "said contiguous sequence" has no antecedent basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

2.   Claims 23-25,27, 29, 33,34 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gvozdanovic et al (US 6,600,720) in view of Natarajan et al. (US 5,742,594) and Fang (US

2007/0064722)

For claim 23, Gvozdanovic discloses a method of transmitting data, said method

comprising (see figs. 6-8): defining a first average rate to transmit a first plurality of

packets of said

data for presentation at a receiver (see col 5 lines 25-40 "SCR: Sustained cell rate..long

term average rate"; figs. 6-8, SCR, all cells; col 8 lines 1-15 "sustained cell rate (average

bandwidth) "; col 23 lines 10-15 "receiving end"; col 4 line 1-10 "at the transmitting

entity…regenerates, at the receiving entity")

(b) defining a second rate to transmit a second plurality of packets of said data

comprising a subset of said first plurality of packets wherein said second plurality of

packets is less than said first plurality of packets, wherein said second rate is greater than

said first average rate (see col 5 lines 25-40 "PCR…SCR<PCR..MBS…maximum

number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8

PCR=4SCR, MBS; col 7 lines 25 through col 8 line 15 " maximum length…transmit at

PCR…PCR=4SCR…maximum length")' transmitting said second plurality of packets

(see col 5 lines 25-40 "PCR…SCR<PCR..MBS…maximum number..at PCR within the

terms of the SCR..define bounds on burst durations"; figs. 6-8 PCR=4SCR, MBS; col 7

lines 25 through col 8 line 15 " maximum length…transmit at

PCR…PCR=4SCR…maximum length") from a transmitter to said receiver (col 23 lines

10-15 "receiving end"; col 4 line 1-10 "at the transmitting entity...regenerates, at the receiving entity"

For claim 24, Gvozdanovic discloses wherein said second plurality of packets are provided to said transmitter at the maximum rate (see col 7 lines 1-15 "maximum allocated voice bandwidth..."; col 5 lines 25-40 "PCR...maximum rate").

For claim 25, Gvozdanovic discloses said second plurality of packets are provided as a burst of packets with at least two packets transmitted in a back-to-back fashion without other packets between them (see col 5 lines 25-40 "PCR...SCR<PCR..MBS...maximum number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8 burst; col 7 lines 25 through col 8 line 15 " maximum length...transmit at PCR...PCR=4SCR...maximum length").

For claim 27, Gvozdanovic discloses all packets of said second plurality of packets contain at least one of audio data (see col 5 line 15-40 "voice traffic"; col 7 lines 25 through col 8 line 15 " voice channel").

For claim 29, Gvozdanovic discloses wherein said transmitting is by an APPLICATION LAYER (see col 5 line 25-35 "voice applicaton").

For claim 33, Gvozdanovic discloses wherein steps (b) and (c) are performed a plurality of times over a time period (see figs. 6-8).

For claim 34, Gvozdanovic discloses wherein said first average rate is equal to the bit rate of the data source (see col 5 line 15-40 "Variable bit rate...").

Gvozdanovic is silent about:

For claim 23, average rate; from a transmitter to said receiver over a wireless interconnection

Natarajan from the same or similar field of endeavor discloses the following features:

Natarajan discloses from a transmitter to said receiver over a wireless interconnection
(see fig. 1 12-32; col 1 line 60 through col 2 line 15; col 2 lines 38-50).

Fang from the same or similar field of endeavor discloses the following features:

For claim 23, Fang discloses a average rate (see section 0091-92 "PCR...mean rates...")

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify / combine the features of Natarajan by using the above recited

features, as taught by Gvozdanovic and Fang, in order to provide a reactive, realtime

congestion control management method which allows more connections to be transported

while maintaining quality(see Gvozdanovic cols 1-2) and to efficiently transport

synchronous data with limited jitter over a communication channel while making the

remaining available bandwidth of the channel (see Fang section 0007)

3.   Claims 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvozdanovic

et al (US 6,600,720), Natarajan et al. (US 5,742,594), Fang (US 2007/0064722) as applied to

claim 23, further in view of Sugar et al. (US 2007/0263657)

For claim 26, Gvozdanovic, Natarajan and Fang discloses the claimed invention as

described above.

Gvozdanovic, Natarajan and Fang are silent about:

For claim 26, said wireless interconnection is IEEE 802.11 compliant

Sugar from the same or similar field of endeavor discloses the following features:

For claim 26, Sugar discloses said wireless interconnection is IEEE 802.11 compliant

(see section 0053 "802.11"; section 0060 "IEEE 802.11").

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify / combine the features of Gvozdanovic, Natarajan and Fang by using

the above recited features, as taught by Sugar, in order to provide wireless network access

points via widely available WLAN AP thus extending the area covered.

4.   Claims 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvozdanovic

et al (US 6,600,720), Natarajan et al. (US 5,742,594), Fang (US 2007/0064722) as applied to

claim 23, further in view of Makrucki (US 5,548,581)

For claim 28, Gvozdanovic, Natarajan and Fang discloses the claimed invention as

described above.

Gvozdanovic, Natarajan and Fang are silent about:

For claim 28, said second plurality of packets is transmitted in a duration less than 1

second.

Makrucki from the same or similar field of endeavor discloses the following features:

For claim 28, Makrucki discloses said second plurality of packets is transmitted in a

duration less than 1 second (see col 8 lines 20-40 "0.256 milliseconds…1 burst").

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify / combine the features of Gvozdanovic, Natarajan and Fang by using

the above recited features, as taught by Makrucki, in order to provide a communication

system with an improved ability to make connection acceptance/rejection decisions (see

Makrucki col 2)

5.   Claims 30,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gvozdanovic et al (US 6,600,720), Natarajan et al. (US 5,742,594), Fang (US 2007/0064722) as

applied to claim 23, further in view Khirman (US 20080117915)

      For claim 30,31, Gvozdanovic, Natarajan and Fang discloses the claimed invention as

      described above.

      Gvozdanovic, Natarajan and Fang are silent about:

      For claim 30 , wherein said transmitting is by a transport layer

      For claim 31 and 42, wherein said transmitting is by a network layer

      Khirman from the same or similar field of endeavor discloses a communication network

      with the following features:

      For claim 30, Khirman discloses wherein said transmitting is by a transport layer (see

      section 0004 "transport layer…network layer"; see fig. 1).

      For claim 31, Khirman discloses wherein said transmitting is by a network layer (see

      section 0004 "transport layer…network layer"; see fig. 1).

      It would have been obvious to one of the ordinary skill in the art at the time of the

      invention to modify the system of Gvozdanovic, Natarajan and Fang by using the

      features, as taught by Khirman, in order to provide a module where multiple higher level

      functions can operate on any lower level functions

6.   Claims 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvozdanovic

et al (US 6,600,720), Natarajan et al. (US 5,742,594), Fang (US 2007/0064722) as applied to

claim 23, further in view Vega-Garcia et al (US 2003/016630)

> For claim 32, Gvozdanovic, Natarajan and Fang discloses the claimed invention as
>
> described above.
>
> Gvozdanovic, Natarajan and Fang are silent about:
>
> For claim 32, wherein the arrival times of a plurality of said second plurality of packets at
>
> the receiver are used to estimate the available bandwidth of said wireless interconnection.
>
> Vega-Garcia from the same or similar field of endeavor discloses a communication
>
> network with the following features:
>
> For claim 32, Vega-Garcia discloses wherein the arrival times of a plurality of said
>
> second plurality of packets at the receiver are used to estimate the available bandwidth
>
> (see section 0019 "Each of the devices..use the difference in arrival times…control
>
> packets…approximate the bandwidth available") of said wireless interconnection (see
>
> section 0021, 0023 "wireless media").
>
> It would have been obvious to one of the ordinary skill in the art at the time of the
>
> invention to modify the system of Gvozdanovic, Natarajan and Fang by using the
>
> features, as taught by Vega-Garcia, in order to provide a method and system for
>
> approximating the available bandwidth over a network without significantly increasing
>
> network traffic (see Vega-Garcia sections 0004-15)

7.   Claims 35-37, 40, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gvozdanovic et al (US 6,600,720) in view of Natarajan et al. (US 5,742,594).

For claim 35, Gvozdanovic discloses A method of transmitting a contiguous sequence of

data (see figs 6-8, burst), said method comprising:

(a) defining a transmission rate to transmit a plurality of packets of said contiguous

sequence data wherein said transmission rate is greater than the average rate for

transmitting said data to a receiver (see col 5 lines 25-40

"PCR...SCR<PCR..MBS...maximum number..at PCR within the terms of the

SCR..define bounds on burst durations"; figs. 6-8 PCR=4SCR, MBS; col 7 lines 25

through col 8 line 15 " maximum length...transmit at PCR...PCR=4SCR...maximum

length")' ;

(b)

transmitting said plurality of packets of said data (see col 5 lines 25-40

"PCR...SCR<PCR..MBS...maximum number..at PCR within the terms of the

SCR..define bounds on burst durations"; figs. 6-8 PCR=4SCR, MBS; col 7 lines 25

through col 8 line 15 " maximum length...transmit at PCR...PCR=4SCR...maximum

length")' over a

interconnection (col 23 lines 10-15 "receiving end"; col 4 line 1-10 "at the transmitting

entity...regenerates, at the receiving entity"), wherein all packets contain at least one of

audio data (see col 5 line 15-40 "voice traffic"; col 7 lines 25 through col 8 line 15 "

voice channel

For claim 36, Gvozdanovic discloses wherein said second plurality of packets are

provided to said transmitter at the maximum rate (see col 7 lines 1-15 "maximum

allocated voice bandwidth…"; col 5 lines 25-40 "PCR…maximum rate").

For claim 37, Gvozdanovic discloses said second plurality of packets are provided as a

burst of packets with at least two packets transmitted in a back-to-back fashion without

other packets between them (see col 5 lines 25-40 "PCR…SCR<PCR..MBS…maximum

number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8

burst; col 7 lines 25 through col 8 line 15 " maximum length…transmit at

PCR…PCR=4SCR…maximum length").

For claim 40, Gvozdanovic discloses wherein said transmitting is by an APPLICATION

LAYER (see col 5 line 25-35 "voice applicaton").

For claim 44, Gvozdanovic discloses wherein said first average rate is equal to the bit rate

of the data source (see col 5 line 15-40 "Variable bit rate…").

Gvozdanovic is silent about:

For claim 36, wireless interconnection

Natarajan from the same or similar field of endeavor discloses the following features:

For claim 36, Natarajan discloses wireless interconnection (see fig. 1 12-32; col 1 line 60
through col 2 line 15; col 2 lines 38-50).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify / combine the features of Natarajan by using the above recited

features, as taught by Gvozdanovic and Fang, in order to provide a reactive, realtime

congestion control management method which allows more connections to be transported

while maintaining quality(see Gvozdanovic cols 1-2)

8.   Claims 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvozdanovic

et al (US 6,600,720), Natarajan et al. (US 5,742,594), as applied to claim 35, further in view of

Sugar et al. (US 2007/0263657)

> For claim 38, Gvozdanovic, Natarajan and Fang discloses the claimed invention as
>
> described above.
>
> Gvozdanovic, Natarajan and Fang are silent about:
>
> For claim 38, said wireless interconnection is IEEE 802.11 compliant
>
> Sugar from the same or similar field of endeavor discloses the following features:
>
> For claim 38, Sugar discloses said wireless interconnection is IEEE 802.11 compliant
>
> (see section 0053 "802.11"; section 0060 "IEEE 802.11").
>
> It would have been obvious to one of the ordinary skill in the art at the time of the
>
> invention to modify / combine the features of Gvozdanovic, Natarajan by using the above
>
> recited features, as taught by Sugar, in order to provide wireless network access points
>
> via widely available WLAN AP thus extending the area covered.

9.   Claims 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvozdanovic

et al (US 6,600,720), Natarajan et al. (US 5,742,594), as applied to claim 35, further in view of

Makrucki (US 5,548,581)

For claim 39, Gvozdanovic, Natarajan and Fang discloses the claimed invention as described above.

Gvozdanovic, Natarajan and Fang are silent about:

For claim 39, said second plurality of packets is transmitted in a duration less than 1 second.

Makrucki from the same or similar field of endeavor discloses the following features:

For claim 39, Makrucki discloses said second plurality of packets is transmitted in a duration less than 1 second (see col 8 lines 20-40 "0.256 milliseconds...1 burst").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the features of Gvozdanovic, Natarajan by using the above recited features, as taught by Makrucki, in order to provide a communication system with an improved ability to make connection acceptance/rejection decisions (see Makrucki col 2)

10.   Claims 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvozdanovic et al (US 6,600,720), Natarajan et al. (US 5,742,594), Fang (US 2007/0064722) as applied to claim 35, further in view Khirman (US 20080117915)

For claim 41,42, Gvozdanovic, Natarajan discloses the claimed invention as described above.

Gvozdanovic, Natarajan are silent about:

For claim 41, wherein said transmitting is by a transport layer

For claim 42, wherein said transmitting is by a network layer

Khirman from the same or similar field of endeavor discloses a communication network

with the following features:

For claim 41, Khirman discloses wherein said transmitting is by a transport layer (see

section 0004 "transport layer...network layer"; see fig. 1).

For claim 42, Khirman discloses wherein said transmitting is by a network layer (see

section 0004 "transport layer...network layer"; see fig. 1).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the system of Gvozdanovic, Natarajan by using the features, as

taught by Khirman, in order to provide a module where multiple higher level functions

can operate on any lower level functions

11.   Claims 43, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gvozdanovic et al (US 6,600,720), Natarajan et al. (US 5,742,594), as applied to claim 35,

further in view Vega-Garcia et al (US 2003/016630)

For claim 43, Gvozdanovic, Natarajan discloses the claimed invention as described

above.

For claim 45, Gvozdanovic performing said transmitting and a plurality of times over a

time period (see figs 6-8).

Gvozdanovic, Natarajan are silent about:

For claim 43, wherein the arrival times of a plurality of said second plurality of packets at the receiver are used to estimate the available bandwidth of said wireless interconnection.

For claim 44, estimating.

Vega-Garcia from the same or similar field of endeavor discloses a communication network with the following features:

For claim 43, Vega-Garcia discloses wherein the arrival times of a plurality of said second plurality of packets at the receiver are used to estimate the available bandwidth (see section 0019 "Each of the devices..use the difference in arrival times…control packets…approximate the bandwidth available") of said wireless interconnection (see section 0021, 0023 "wireless media").

For claim 43, Vega-Garcia discloses estimating (see section 0019 "Each of the devices..use the difference in arrival times…control packets…approximate the bandwidth available")

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Gvozdanovic, Natarajan by using the features, as taught by Vega-Garcia, in order to provide a method and system for approximating the available bandwidth over a network without significantly increasing network traffic (see Vega-Garcia sections 0004-15)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this
Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).
Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within TWO
MONTHS of the mailing date of this final action and the advisory action is not mailed until after
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,
however, will the statutory period for reply expire later than SIX MONTHS from the date of this
final action.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to KENAN CEHIC whose telephone number is (571)270-3120.
The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, KWANG BIN YAO can be reached on (571) 272-3182. The fax phone number for
the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenan Cehic/
Examiner, Art Unit 2416

/KWANG B. YAO/

Supervisory Patent Examiner, Art Unit 2416